Ham-Homebrew Digest   Sat, 8 Oct 94   Volume 94 : Issue 297

Today's Topics:
                            aprs505e.exe
                      Cordless Phone Reciever?
                       Dead Atlas transceiver
                   Help ID'ing SDT components???
                Homebrew Antennas for cordless phones
                        Impedance calculator
                        INDUCTANCE MEASURING
                         Lead-Acid Charger
                       Mic impedence converter
              NA4G presents: Batteries, Chargers, Charging
                Need INFO on HAL CRI-200 RTTY Interface
                       QRP Mailing list (2 msgs)
                  Search for Homebrew SW Receiver Info
                  Using Overtone Crystals For Filters

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 7 Oct 94 11:40:48 EDT
From: landisj@drager.com (Joe Landis - Systems & Network Mgr)
Subject: aprs505e.exe

In article <36umc7$ftu@charles.cdec.polymtl.ca>, igor@step.polymtl.ca (Mathieu
Fortin) writes:
> i would like to know an adress where i could get the file APRS505E.EXE
>
> Mathieu Fortin

>

Try /pub/msdos/packet at OAK.Oakland.edu
Joe - AA3GN
--
Joe Landis - Systems and Network Manager - North American Drager - Telford, PA
landisj@drager.com - Ax25: AA3GN@WA3TSW.#EPA.PA.USA.NOAM - ampr: [44.80.8.153]
Counting the days til deer season!   Politically correct sig not available.

Date: Fri, 7 Oct 1994 11:21:04 UNDEFINED
From: fleming@mcs.com (John Fleming)
Subject: Cordless Phone Reciever?

Does anyone know where there might be a schematic/parts list, or article,
about building a receiver for standard (non-digital) cordless phone
transmissions? I think they're somewhere in the 49 Mhz range, identified by
1-10 channels. Anyone Help?
Thanks,
John Fleming, N9NDH

"May your Sandcastles | John Fleming |
 as big as the beach" | johnflem@mcs.com |
               | "opinions are free, advice will cost you"|
==

Date: 7 Oct 94 15:15:44 GMT
From: mack@mails.imed.COM
Subject: Dead Atlas transceiver

     >VE3TSC wrote:
     >Subject: Need 71488A for Atlas HF

     >I recently purchased this fine rig - Atlas 210X - which came with the
     >VOX and digital display external units. While using it for a special
     >event station the display quit. Troubleshooting brought it down to
     >the
     >decoder chips. Problems is none of the electronic shops in town
     >(Ottawa)
     >or RF Parts in California could help me. The set was manufactured in
     >1977 ans it seems chips that old are hard/impossible to get. Sow
     >ondering if anyone here could have some for sale or give me a place
     >to
     >call to get/order some. Required is quantity (2) 74188A or 74LS188
     >chips. Thank you in advance for helping out, Jacques.

Jaques:

You can get the chips you want through Digi-Key but they won't help
you any. The problem is that they are bipolar PROM's. You will need
a copy of the service manual which hopefully lists the program for the
chips. Perhaps Atlas is still in business and you can get either the
already programmed version or they can supply the bit pattern for the
parts.

If you get the bit pattern and the parts I can burn the PROM's for you
or perhaps someone locally can do it for you.

Ray

Date: 7 Oct 1994 07:31:02 -0400
From: jimn0oct@aol.com (JimN0OCT)
Subject: Help ID'ing SDT components???

I need some help ID'ing some transistors which arent' cross referenced in
the NTE book or in any catalogs I have handy:

SDT5554   small signal transistor

SDT7605   powwer transistor

These were pulled from an instrument power supply, and if applicable, will
become part of a new power supply for the Amateur Service.

Thanks in advance!
73, jim n0oct

Date: 7 Oct 1994 07:59:54 GMT
From: laforest.snowcrest.net@ucsd.edu (Dale LaForest)
Subject: Homebrew Antennas for cordless phones

Does anyone know if the range of cordless phones can be extended by adding
a long wire to the end of the antenna?

This digitial cordless phone uses 900 mhertz frequency... and should the
antenna be any particular length to optimize its effectiveness?

I'm wondering because I heard that digital cordless phones might have up

to 4 times the range of standard cordless phones...(700' max), ... so I'm
wondering if a 1/2 mile range is possible?

thanks

Dale LaForest
e:mail at

laforest@snowcrest.net
(916)926-5115

Date: 6 Oct 1994 07:40:30 GMT
From: fontana@itnvax.science.unitn.it
Subject: Impedance calculator

I have uploaded to SimTel, the Coast to Coast Software Repository (tm),
(available by anonymous ftp from the primary mirror site OAK.Oakland.Edu
and its mirrors):

SimTel/msdos/hamradio/
rfmatch6.zip   Hams: RF match calculator and optimizer

RF match calculator optimizer is a graphic impedance calculator. The
program can be used to match sources to loads with networks made with
impedances, inductors, capacitors, transmission lines, stubs and trans-
formers. Frequency and components can be trimmed on line and the result
is imediately shown. Frequency sweep and montecarlo simulation can be
used to evaluate the behaviour of the matching network. Autotuning
helps the user to find a solution to matching problems. A pop-up
calculator for complex numbers is also included.

Special requirements: EGA (VGA).

Changes: Frequency sweep with markers.
         Licensed version: Mouse control of cursor. Ability to load a
         file of start impedances.

rfmatch6.zip has replaced rfmatch5.zip.

ShareWare. Uploaded by the author.

Giorgio Fontana
fontana@itnvax.science.unitn.it

Date: 7 Oct 1994 17:37:12 GMT
From: pelt@vt.edu (Ranson J. Pelt)
Subject: INDUCTANCE MEASURING

QST

Can anyone give me some advice on a good piece of equipment for measuring
inductances. I have an LCR meter (LCR 195) which I purchased from Alpha
Elec. several years ago. This meter works great for measuring capacitance
but just doesn't get it for measuring small inductances (uh range).

Tnx for the help.

de nz4i Randy

--
Ranson Pelt
pelt@vt.edu
QST de nz4i

Date: 6 Oct 1994 14:11:09 -0400
From: ss@JH.Org (Steve Steinberg)
Subject: Lead-Acid Charger

I want to build a battery charger for deep-cycle (marine) batteries.
I would like this to be the primary power for my gear. Currently
I have a dual band HT and an amp, drawing 7.5 amps (xmit). A
lowband rig would draw 20 amps on xmit. During emergencies
I guess I would run it QRP, but normally I would want to go
full power. We should probably add a laptop for packet, I have
no idea what they consume.

Would the battery be able to power such a setup for hours or days, assuming
standard xmit to receive ratios and the like? Is this a rediculous idea?
Should I buy a 20 or 35 amp power supply and forget the batteries?

If the batteries are feasible I will need a charger. There is
one in the ARRL Handbook (1994) using a 3906 (?) IC. I know
that the various resistor values will change for the voltage and
current loads that the battery needs but what about that
pass transistor? The article even says that it may not be
sensitive enough for heavy loads. Can someone suggest an
alternative transistor or schematic?

Thanks for your input!

--

Date: 7 Oct 1994 15:17:30 GMT
From: salhany@bmerha9e.bnr.ca (Wayne Salhany)
Subject: Mic impedence converter

Thanks to all who replied...

Last evening I gave a few options a try and it looks like I'll have to build
a small Op Amp circuit as the output is too low to drive the rig without.

Thanks again,

Wayne
VE3WQS

Date: 7 Oct 1994 17:31:50 GMT
From: ab4el@cybernetics.net (Stephen Modena)
Subject: NA4G presents: Batteries, Chargers, Charging

[Instructions for retrieving 'batterie.ps' are at the bottom of
 this message.]
****

The following article (batterie.ps) is a short article about batteries
and battery charging. It covers many types of batteries that amateurs
might find useful around the hamshack. It does not cover small HT
style batteries, although the principles would be similar.

Most of the batteries that I use are from the local scrapyard, and
were junked from industrial lighting systems, etc. I can usually
get a couple of years of service out of almost any of them, with
a little care, and some thought about bringing them back up to snuff.

****

        REVISION of 6 OCTOBER, 1994.

        THE JUNIOR OPERATOR'S GUIDE BATTERIES, BATTERY CHARGERS, AND
        BATTERY CHARGING.

        A Practical Compendium of All That Junk You Might Want to

Know.

By Robert D. Keys, NA4G

Addenda to a presentation by Alan Pitegoff (AB4OZ) and
Robert D. ``Boat Anchor Bob'' Keys (NA4G) to the Homebrew
Special Interest Group of the Raleigh Amateur Radio Society
(RARS) 26 August, 1992 and 26 May, 1993.

The following document contains excerpts taken from numerous
sources. Where possible, full citation of said sources in
given. Where not possible, as full a citation as possible,
based upon the author's existing information is given. This
document is placed in the public domain and is freely
copyable and distributable.

Robert D. Keys, NA4G
Raleigh, NC,
25 September, 1994.

****

Enjoy
73 DE NA4G
Boatanchor Bob

****
* 73 TU SU SK DE NA4G   ``Boat Anchor Bob'', an ol' CW fart. *
****
* Morse has been in the family for over 100 years.   *
* Morse radiotelegraphy (Spark/CW) has been in the family since 1914.   *
****
* May you have fair winds and following seas on your watch at the key. *
****

[The files referred to in this 'readme' can be retrieved by
  anonymous ftp from two archive sites:

    SunSITE.unc.edu   (permanent)
    /pub/academic/agriculture/agronomy/ham/things-to-build/na4g

    ftp.Cybernetics.NET   (temporary -- easier to get in)
    /pub/users/ab4el

  For ease, the group of files have been 'rolled into one'...

    batterie.tar.Z   (for Unix jocks)
    batterie.zip   (using PKZIP 2.04g for MS-DOS users)

Don't forget to set 'binary' mode before 'get'...else they will
   come to you as trash. :^)

   de AB4EL]

---------------Cut Here------------------

Date: 7 Oct 1994 14:45:34 GMT
From: rdkeys@csemail.cropsci.ncsu.edu (R. D. Keys)
Subject: Need INFO on HAL CRI-200 RTTY Interface

Hello Friend Hams.....

I have just purchased a HAL CRI-200 Computer RTTY Interface and am
looking to find some information on same.

1. Does anyone have a manual that I could get a xerox of?

2. What is the power voltage and polarity required at the dc power
    adapter socket on the back panel (+12vdc? GND=SHELL?).

3. What is the pinout and interface specifications on the 5 pin
    computer I/O port connector? I am assuming RS-232, but it could
    be something funky like 5V tty RS-232, or it might even be current
    loop (20 ma).

4. What are the cw keying polarities on the two keying jacks?
Any Help is appreciated

Most Sincerely,
Robert D. Keys, ``Boatanchor Bob'', NA4G
rdkeys@csemail.cropsci.ncsu.edu

p.s. What in the world am I doing playing around with non-vacuum-tube
      technology..... (:+}}.....

****
* 73 TU SU VA DE NA4G   ``Boat Anchor Bob'', an ol' CW fart. *
****
* Morse has been in the family for over 100 years.   *
* Morse radiotelegraphy (Spark/CW) has been in the family since 1914. *
****
* May you have fair winds and following seas on your watch at the key. *
****

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Date: 7 Oct 1994 09:18:00 -0400
From: w4qo@peach.america.net (James C. Stafford)
Subject: QRP Mailing list

Frank posted a request for how to subscribe to the QRP mailing list.  I
tried to thread but got the message back for some reason.  Anyway, you can
subscribe by sending message to

listserv@netcom.com

The subject does not matter but in the body of the message put

subscribe qrp-l

If you don't like the 20 -30 messages that you get per day(there is no
digest right now), you can send another message with the body being
unsubscribe qrp-l

Good luck, Jim, W4QO
---------------------------------------------

 fro@xs4all.nl (Frank R. Oppedijk) writes:

>Dear fellow hams,
>
>(Sorry for posting this in a not so appropriate place.)
>
>In this newsgroup I read about a QRP mailing list, lately. Unfortunately, the
>post did not mention a subscribe address. Could someone please be so kind to
>drop me an email message with how to subscribe? TIA!
>
>73,
>
>Frank, PA3FLV
>fro@xs4all.nl


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Date: Sat, 8 Oct 1994 00:45:13 GMT
From: jeffrey@kahuna.tmc.edu (Jeffrey Herman)
Subject: QRP Mailing list

In article <w4qo.781535637@atl1> w4qo@peach.america.net (James C. Stafford)
writes:
>Frank posted a request for how to subscribe to the QRP mailing list.  I
>tried to thread but got the message back for some reason.  Anyway, you can
```

Well, there is a daily and 3-day digest available via ftp:
ftp sunsite.unc.edu then
cd pub/academic/agriculture/agronomy
then do a `dir' and look for DAILY.QRP and `get' it.

Jeff NH6IL

Date: 7 Oct 1994 17:57:37 GMT
From: asmith@UTKVX.UTCC.UTK.EDU (A.L. Smith)
Subject: Search for Homebrew SW Receiver Info

Does anyone know of FTP or other source of plans for building a simple
SW Receiver?
Thanks,
asmith@utkvx.utk.edu

Date: 6 Oct 94 22:49:01 GMT
From: mack@mails.imed.COM
Subject: Using Overtone Crystals For Filters

      >Date: 20 Sep 1994 06:34:18 GMT
      >From:
      >ihnp4.ucsd.edu!munnari.oz.au!newsroom.utas.edu.au!news@network.ucsd.e
      du
      >Subject: Overtone Crystal Filter
      >Ian wrote:

      >Electronics Australia published an SSB receiver with an IF of 8MHZ
      >using 3 8MHZ computer xtals in a ladder network configuration. All
      >the capacitors were 100pF. The article said using a ladder network
      >enabled the xtals to be all resonant at the same frequency.

>Can the same idea be used with overtone xtals? For example, I would
>like to build a 48MHz IF filter.

>Thanks for any info, Ian

Well, I took this as a personal challenge to find out what's what. I
hooked up 3 48MHz microprocessor crystals to the network analyser.
These crystals were CTS model MP-480. I measured them at 16 MHz and
at 48 MHz for their equivalent circuits. At 16 MHz they showed very
good response with about 3 ohms equivalent series resistance and Q
over 100,000. At 48 MHz 2 showed good Q of about 160,000 and 15 Ohms
equivalent resistance. The third had much better series R of only 9
Ohms, but the Q was considerably less and it was also not a good match
for frequency.

I used the design equations from the May 1982 QST article (Hayward)
for 2, 3, and 5 element filters. They all showed reasonable
calculated values as long as the bandwidth was between 1000 Hz and
3000 Hz. Outside these limits either the capacitors got really small
or the load impedance for the filter got really small. In the 2500 to
3000 Hz range the load impedance is high enough that there is minimal
insetion loss.

The 2 element filter I built with the 2 good crystals from my parts
bin showed good agreement with the formulas when measured on the
network analyser.

Digi-Key sells microprocessor crystals for about US $1.35 in this
frequecy range or 10 for US $11.00. This is cheap enough to buy a
bunch and select for matching.

I hope this gives you encouragement to try this, Ian. Here is a short
bibliography of articles which should help if you try to build a
filter. I have arranged them in order of the amount of help they were
to me:

QST   May 1982 pp 21-27
Communications Quarterly Winter 1993 pp 11-18
QST   Nov 1980 pp 20-23
QST   Jul 1987 pp 24-29

I seem to recall one in an old issue of RF Design but I haven't had
time to look for it.

Ray
WD5IFS
mack@mails.imed.com

End of Ham-Homebrew Digest V94 #297
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